

Consultation on the Apalachicola-Chattahoochee-Flint Exceptional Drought Operations

Biological Opinion on the Corps' Exceptional Drought Operations (EDO)

Did the Service "approve" the Corps' EDO plan?

The Service's role under the Endangered Species Act is not to approve or disapprove a federal agency action. The Service's role is to review the Corps' plan and issue an opinion as to whether or not the proposed action would jeopardize the continued existence of listed species or destroy or adversely modify critical habitat. The Service's opinion concluded that the EDO is not likely to jeopardize the listed species nor adversely modify the critical habitat, but that the EDO will likely result in "take" of the listed species. We have given the Corps' some reasonable and prudent measures that will help minimize the effect of that anticipated take.

Why did the Service have to produce a Biological Opinion on the Corps' EDO plan?

The U.S. Army Corps of Engineers determined that enacting the EDO was likely to adversely affect listed species and designated or proposed critical habitat. As required under the Endangered Species Act, the Corps requested formal consultation with the Service to ensure that carrying out their proposed plan would not jeopardize the continued existence of these species or destroy or adversely modify their critical habitat.

In this Biological Opinion, what did the Service conclude about the effect of the Corps' EDO on listed species?

None of the species being considered will be jeopardized or their critical habitat adversely modified by the provisions of the EDO to store additional water, reduce ramping rates, or reduce minimum flow up to 4,500 cfs between now and June 1, 2008.

Did the Service work with the Corps to develop the EDO?

Yes, the Service worked with the Corps' staff to evaluate various options for operational changes that would result in an increase in composite storage in the reservoirs as well as minimizing the harm that might result to listed species if minimum flows in the Apalachicola River were reduced.

Why were incremental reductions in minimum flow analyzed?

The Corps' EDO was first transmitted to the Service on November 1, 2007, but its description of proposed action was amended in a letter sent to us on November 7, 2007. The Corps amended its plan to state that the EDO would be implemented in incremental reductions of 4,750 cfs and 4,500 cfs prior to reaching a final minimum flow of 4,150 cfs. The Corps indicated that upon beginning the EDO, minimum flows would drop to 4,750 cfs and it would plan to work with the Service to determine the appropriate triggers or criteria to indicate when the minimum flows would change from 4,750 cfs to 4,500 and from 4,500 cfs to 4,150 cfs.

The criteria employed to determine when it is necessary to drop minimum flows to 4,150 cfs are likely to be informed by environmental conditions changing over time. The Corps also indicated that it wants to work with the Service to develop conservation measures that could reduce the take that might occur at that level of flow.

In addition, the Governors of Alabama, Georgia, and Florida have pledged to come together next month to develop a joint drought plan, which may affect future operations. Therefore, much uncertainty exists about when and under what conditions flows may drop to the final level of 4,150 cfs. In this BO, completed under a greatly abbreviated time frame for analysis, we acknowledged the Corps' plan to eventually drop flows to 4,150 cfs if necessary, but were unable to complete that portion of the consultation in the



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compressed timeframe. When the trigger is developed, the consultation on the EDO will be reinitiated (no later than April 15, 2008) so that an assessment of effects to mussels at minimum flows of 4,150 cfs may be done.

How long will the EDO be in place?

We are uncertain how long the Corps' EDO will be in place. The EDO describes a return to the Interim Operating Plan when composite system storage returns to Zone 2. This, of course, is dependent on the amount of rain in the watershed.



Returning to IOP also may depend on the selection of criteria and triggers and any proposal that may result from the Governors of Alabama, Georgia, and Florida meeting next month on developing a joint drought plan for the basin. Therefore, we have analyzed the effects of this plan through June 1, and anticipate the Corps reinitiating consultation by April 15, 2008.

What does it mean to "reinitiate consultation"?

Federal agencies who have previously consulted with us on the effects their actions may have on listed species are required to come back for additional consultation if:

- the amount or extent of anticipated incidental take is exceeded;
- new information reveals the effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;
- the action is modified in a manner that causes effects to listed species or critical habitat not previously considered; or
- a new species is listed or critical habitat designated that may be affected by the action.

Will mussels be killed under this plan?

The fat threeridge mussel is the most vulnerable because it generally occupies areas with water depths less than four feet. It is likely that fat threeridge mussels will be exposed when flows in the river decrease. When flows remain lower for many days; the mussels would be unable to survive. As minimum flows drop to 4,750 cfs, we anticipate about two percent of known fat threeridge mussels would be exposed and at risk of death. If minimum flows drop to 4,500 cfs, we anticipate about nine percent of known fat threeridge mussels would be exposed and at risk of death.

How can the Service allow mussels to be killed? Doesn't the Endangered Species Act prohibit that from happening?

When Congress wrote the Endangered Species Act, it prohibited activities that would injure or kill Federally-listed species, or prevent those species from carrying out their normal life cycles in the wild.

The Congress also recognized that it might be necessary for Federal agencies to injure or kill Federally-listed species when carrying out Agency missions for the benefit of the American people. Therefore, it established procedures under section 7 of the Act, which allows agencies to carry out their lawful missions, provided these actions are unlikely to jeopardize Federally-listed species or destroy or adversely modify their designated critical habitat. If a Federal action agency engages in formal



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consultation with the Service and receives a biological opinion and incidental take statement, the unintentional injury or death that would result to these species is not prohibited.

What will be the effects of this plan on Gulf sturgeon?

With lower levels of freshwater flowing into Apalachicola Bay, salinity levels in the bay have risen. The effects of this on sturgeon are likely to occur with or without the EDO – they are attributable to the drought. It is possible that juvenile sturgeon in particular could be impacted by both delayed entry to the feeding areas of the bay and a potential reduction in productivity of these normally rich

feeding areas. Poor growth and/or lower survival of juvenile sturgeon may be a result. Adult sturgeon appear to be better adapted to the higher salinity levels and may be able to exploit other feeding areas in the bay and the Gulf.

In addition, at a minimum flow of 4,500 cfs, Gulf sturgeon spawning habitat in the river may be reduced by approximately one to three acres. Spring flows providing similar habitat availability values have occurred about 10% of the time in the observed flow record 1975-2001. A one-time reduction in habitat availability of one to three acres due to the EDO this spring is not considered significant for this species. Spawning habitat availability has not been identified as a limiting factor to Gulf sturgeon recovery. The population is currently considered stable to increasing.

How much less water will leave Lake Lanier now that this plan is in place?

Questions about the provisions of the EDO and likely effects to reservoirs and river water levels are best directed to the Corps of Engineers.

What would happen to the endangered and threatened species if the Corps' continued to operate under the current Interim Operating Plan (IOP)?

The answer to this question depends on whether the drought conditions continue.

The Corps' BA analyzed

the effects of the continuation of the current IOP under drought conditions twenty percent worse than what was experienced during the 1999-2001 drought. It concluded that Composite Conservation Storage within the system was very nearly depleted going into the Fall of 2008. Under a more severe drought forecast, storage was depleted. If the drought continues, under either drought scenario the effects on listed species would be worse under the IOP than they would be under the EDO because system storage would not be available to respond to continuing drought conditions and to supplement flows in the river.

What facet of the Corps' EDO makes the most difference to retaining more water in the reservoirs over the next year?

The greatest system gain in storage comes from suspending the ramping requirement and in allowing for storage of up to 100 percent of basin inflow greater than the minimum required flow until composite storage enters Zone 2.

What effect did the designation of Critical Habitat have on this consultation?

The species critical habitat was previously considered in the IOP and again for the EDO. It is a separate analysis contained in the biological opinions. There are no additional requirements of the biological opinion that result from the designation of critical habitat.

General Section 7

What is the purpose of the Fish and Wildlife Service's Biological Opinion?

Under section 7 of the Endangered Species Act (ESA), Federal agencies are required to consult with the Fish and Wildlife Service (Service) when their actions may affect listed species. The Army Corps of Engineers (Corps) has asked the Service to consult on management of available water in the Apalachicola-Chattahoochee-Flint (ACF) system.

What is a "Biological Opinion"?

A biological opinion is a document required under the Endangered Species Act that contains the opinion of the U. S. Fish and Wildlife Service or the National Marine Fisheries Service as to whether a Federal action is likely to result in jeopardy to an endangered or threatened species or result in destruction or adverse modification of its designated critical habitat. It includes a summary of the information on which the opinion is based, and a detailed discussion of the effects of the action on adversely affected species or critical habitat.

What does the term "to jeopardize" mean?

An action is likely to jeopardize the continued existence of a Federally-listed species if it would appreciably reduce the likelihood of both survival and recovery of that species in the wild, by reducing its reproduction, numbers, or distribution.

What is Critical Habitat?

Critical habitat is a term in the ESA that identifies geographic areas with features essential for the conservation of a threatened or endangered species, and which may require special management consideration or protection. These areas are generally, but not necessarily, occupied by the species at the time of designation. Federal agencies are charged with insuring that their actions do not result in the destruction or adverse modification of designated critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. It does not grant government or public access to private lands.

What does the term "destruction or adverse modification" mean?

"Destruction or adverse modification of designated critical habitat" is defined in our regulations as a "direct or indirect alteration that appreciably diminishes the value of the critical habitat for both the survival and recovery of a listed species" (50 CFR 402.02). Such alterations include, but are not limited to, adverse changes to the physical or biological features that were the basis for determining the habitat to be critical. Two federal courts in two separate critical habitat cases have ruled that this definition is invalid.

In response to these rulings, we are currently reviewing the definition, but have not yet proposed any revision to the regulations. Until new regulations are adopted, we must rely upon the ESA statute itself and the court decisions to determine if an action would alter or affect the proposed critical habitat in the action area to the extent that it would appreciably diminish the habitat's capability to provide the intended conservation role for these mussels in the wild.

What is incidental take?

Incidental take is death or injury to a listed species that results from (but is not the purpose of) carrying out an otherwise lawful activity on the part of a Federal agency.

What is an incidental take statement?

If formal consultation has determined that a Federal action will not jeopardize the continued existence of an endangered or threatened species, yet the action is still likely to result in some level of unintentional injury or death to that species, an incidental take statement in the biological opinion anticipates and exempts from the prohibitions of Section 9 of the ESA the amount of injury or death to individual animals, and suggests ways to minimize that loss.

What does it mean when the Service gives the Corps a "reasonable and prudent measure"?

If a Federal action agency engages in formal consultation with the Service, and the Service determines that the proposed action is not likely to jeopardize the continued existence of a Federally listed species, the Service prepares reasonable and prudent measures for the action agency. These are actions the Service believes necessary to minimize the adverse effects of the anticipated take. Each reasonable and prudent measure is accompanied by specific terms and conditions to implement them. Although reasonable and prudent measures are non-discretionary, they must involve only a minor change to the action, must be specific in how they will reduce the level of incidental take resulting from the action, and must be clear and specific in how they can be accomplished. Reasonable and prudent measures are developed in cooperation with the Federal action agency during formal consultation and the action agency is given the final determination as to whether these measures are "reasonable and prudent."